Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Currently amended) ~~A method for dynamically determining costs for links of a network wherein the network has a corresponding set of defined routing factors based on characteristics of the network links and wherein each routing factor has one or more allowable values, said~~ The method of claim 16 further comprising ~~the steps of~~:

~~selecting one or more routing factors from the set of routing factors;~~

~~for each selected routing factor, selecting one or more of the allowable values;~~

prioritizing the ~~selected~~ plurality of routing factors; and

for each ~~selected~~ routing factor, prioritizing the ~~selected~~ allowable values;~~ and~~

~~for any given link in the network:~~

~~determining for each selected routing factor which selected allowable value, if any, matches the characteristics of the link;~~

~~combining the prioritization of each matched value with the prioritization of that value's corresponding routing factor to determine a cost for each factor; and~~

~~summing the combined costs for each selected routing factor to determine the cost for the link.~~

2.   (Currently amended) The method of claim 1 further comprising ~~the steps of~~:

determining a weight for each ~~selected~~ routing factor automatically based on the prioritization of the routing factor; and

for each ~~selected~~ routing factor, determining a cost for each of the ~~selected~~ allowable values automatically based on the prioritization of the values;~~ and~~

~~wherein the combining step combines the cost of each matched value with the weight of that value's corresponding routing factor to determine the cost for each factor.~~

3.   (Currently amended) The method of claim [[2]] 16 further comprising ~~wherein the step of determining which selected allowable value matches the characteristics of the link further comprises the step of first~~ determining if ~~a given selected~~ the routing factor

applies to the link; and ~~wherein~~ if the <u>routing</u> factor does not apply, assigning a large cost value ~~for that factor when combining costs and weights~~ <u>to the weighting value</u>.

4.   (Currently amended) The method of claim [[2]] <u>16 further comprising</u> ~~wherein in the step of~~ determining ~~which selected~~ <u>if an</u> allowable value matches the characteristic[[s]] of the link[[,]]; <u>and</u> if no ~~selected~~ allowable value ~~for a given selected routing factor~~ matches the characteristic[[s]] of the link, using a large cost value for ~~that factor when combining costs and weights~~ <u>the cost value</u>.

5.   (Canceled)

6.   (Currently amended) ~~A method for determining a route through a network comprising a set of links wherein the network has a corresponding set of defined routing factors that are based on the characteristics of the network links and wherein each routing factor has one or more allowable values, said~~ <u>The</u> method <u>of claim 16 further</u> comprising ~~the steps of~~:

selecting ~~one or more~~ <u>the plurality of</u> routing factors from [[the]] <u>a</u> set of routing factors;

for each selected routing factor, selecting one or more ~~of the~~ allowable values;

assigning a weight to each selected routing factor; <u>and</u>

for each selected routing factor, assigning each selected allowable value a cost~~;~~

~~traversing a plurality of links through the network to determine one or more possible routes wherein a given link is only traversed if each of the selected routing factors applies to the link and if at least one of the selected allowable values for each factor applies to the link and wherein a cost is calculated for each traversed link by:~~

~~determining for each selected routing factor which selected allowable value matches the characteristics of the traversed link;~~

~~for each matched allowable value, weighting the cost of the matched value by the corresponding weight of the routing factor; and~~

~~summing the weighted costs to determine a cost for the traversed link; and~~

~~using the link costs of the traversed links to select a route from among the one or more determined possible routes.~~

7.   (Original) The method of claim 6 wherein the weights assigned to the selected routing factors are based on a prioritization of the factors.

8.   (Original) The method of claim 6 wherein the costs assigned to the selected allowable values for each selected routing factor are based on a prioritization of the allowable values.

9.   (Currently amended) The method of claim 6 wherein ~~for at least one of the selected routing values a default value is selected in addition to~~ the selected one or more allowable values~~, wherein the cost assigning step further assigns a cost to the~~ includes a default value, and wherein ~~the determining step matches~~ the default value [[to]] matches the characteristic of the link if no other ~~selected~~ allowable value matches the characteristic[[s]] of the link.

10. – 15.   (Canceled)

16.   (New) A method for determining a route through a network, the method comprising:

identifying a plurality of routes, wherein each route comprises a plurality of links;

calculating a route cost for each route by summing a link cost calculated for each link of the plurality of links; and

selecting a route based on the calculated route costs;

wherein the link cost for each link is calculated by

determining a weighting value for a routing factor of a plurality of routing factors;

determining a cost value by matching an allowable value of the routing factor to a characteristic of the link;

determining a weighted cost value by combining the determined weighting value with the determined cost value;

repeating the determining operations for each of the plurality of routing factors; and

summing the determined weighted cost value for each of the plurality of routing factors to determine the link cost.

17.   (New) The method of claim 16 wherein the link costs are calculated before identifying the plurality of routes.

18.   (New) The method of claim 16 wherein the link costs are calculated as the plurality of routes are identified.

19.   (New) The method of claim 18 further comprising determining if the routing factor applies to the link; and if not, disregarding the link.

20.   (New) The method of claim 19 further comprising determining if an allowable value for the routing factor matches a characteristic of the link; and if not, disregarding the link.

21.   (New) The method of claim 18 further comprising determining if all of the plurality of routing factors apply to the link; and if not, disregarding the link.

22.   (New) The method of claim 16 further comprising determining if an allowable value for the routing factor matches a characteristic of the link; if not, determining if an allowable value has a default value; and if an allowable value has a default value, determining the cost value based on the default value.

23.   (New) The method of claim 16 wherein the plurality of routes are identified before the link costs are calculated.

24.   (New) The method of claim 16 wherein combining the determined weighting value with the determined cost value comprises multiplying the determined weighting value and the determined cost value.